DOCUMENT RESUME

ED 072 999 SO 005 288

AUTHOR	Marinaccio, Louis M.
TITLE	Creative Mosaics, Art Education: 6683.14.
INSTITUTION	Dade County Public Schools, Miami, Fla.
PUB DATE	71
NOTE	38p.; An Authorized Course of Instruction for the Quinmester Program
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Art; *Art Education; Art Materials; Course Objectives; *Creative Art; Curriculum Guides; Prevocational Education; Secondary Grades; Visual Arts
IDENTIFIERS	Florida; Mosaics; *Quinmester Program

ABSTRACT

This quinmester guide describes a laboratory course designed to offer opportunities for experimentation in mosaic design by exploring uses of various techniques and materials. The course, which is offered to 7th through 12th grade pre-vocational students, emphasizes the use of design in relation to creative composition. Students learn to design, glaze, fire, cut and develop their own tiles, tessera, etc., to be utilized in mosaic projects. Proper use of instruments and tools as well as proper technique is emphasized. In addition to actually producing projects, students learn the importance of mosaic art as a medium for art expression, and the historical background of mosaic design from the Egyptians to contemporary artists. Other sections of the guide include: a course outline; an evaluation section; bibliographies of student and teacher references; a list of places to visit; a list of periodicals of interest, suggested media resources for teachers, and a list of equipment suppliers. Related documents are: SO 005 292, and SO 005 270. (Author/OPH)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

SP005288

ART EDUCATION
Creative Mosaics
6683.14

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1971

ED 072699

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CREATIVE MOSAICS

(Tentative Course Outline)

6683.14

6681.11

6682.11

6687.01

ART EDUCATION

Written by: Louis M. Marinaccio

for the

DIVISION OF INSTRUCTION
Dade County Public Schools
Miami, Florida
1971

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I. COURSE TITLE

CREATIVE MOSAICS

II. COURSE NUMBER

6683.14

6681.11

6682.11

6687.01

III. COURSE DESCRIPTION

A laboratory course designed to offer opportunities for experimentation in mosaic design by exploring uses of various techniques and materials. Emphasis is placed on the use of design in relation to creative compositions. Students design, glaze, fire, cut, and develop their own titles, tessera, etc. to be utilized in mosaic projects.

IV. RATIONALE

The importance of mosaic art as a medium for "serious" art expression cannot be questioned; mosaic masterpieces that have survived millenniums attest to this. For the student the most effective recommendation for making mosaics can be stated quite simply - it is just plain good fun! When one has known the pleasure of creating a mosaic - whatever the material used, it becomes a fascinating artistic expression.

V. COURSE ENROLLMENT GUIDELINES

A. Pre-vocational

B. Grades 7-12

C. No prerequisite

VI. COURSE OF STUDY OBJECTIVES

Competencies expected of the student upon completion of this course, in writing or orally:

A. Definition and background

The student will be able to do the following:

1. Define the term mosaic.
2. Identify the work of several outstanding contemporary mosaicists.

B. Preparation and handling of ceramic and glass tessera.

The student will be able to do the following:

1. Demonstrate the proper method of preparing and handling glass tessera.
2. List the equipment and tools used in preparing ceramic and glass tessera.

C. Mosaic forming

1. Demonstrate the direct and indirect method of mosaic forming.
2. Identify the equipment and tools used in forming clay and glass tessera.

D. Decorating

The student will be able to do the following:

1. Demonstrate techniques of decoration that enhance and fit ceramic and glass mosaics.
2. Identify basic equipment and tools used in decorating mosaics.

E. Glazing

The student will be able to do the following:

1. Create a series of test tiles intended for the pretesting of ceramic and glass glazes.
2. Demonstrate the proper use and care of equipment tools used in glazing.

F. Firing ceramic tessera

The student will be able to do the following:

1. Demonstrate the proper procedure for firing ceramics and glass tessera.
2. Identify several glaze defects of glass and clay tiles due to improper firing.

VII. COURSE CONTENT

A. Definition and background

1. Historical

a. Egyptian

b. Ancient Near East

c. Asia

(1) India

(2) China

(3) Korea

(4) Japan

d. Classical

(1) Crete

(2) Greece

(3) Etrusca

(4) Rome

e. Byzantium (Rome)

f. Islam

g. Pre-Columbian

h. Renaissance in Europe

2. Contemporary

a. Outstanding mosaicists

(1) Frans Wildenhain

(2) Richard Peeler

(3) Thomas Hunt

(4) Mariette Bevington

(5) Charles Clement

(6) Maurice Heaton

(7) F. John Miller

(8) Marlys Frey

(9) Charles Counts

(10) Aleksandra Kasula

(11) Leo Lionni

(12) Ray Rice

(13) Bedri Rahmi Eyuboghi

(14) Stella Popowski

(15) Ruth Dunn

(16) Emmy Lou Packard

(17) Rosalis

(18) Mary Lou Stribling

(19) Rita Sargen

(20) Jean Derval

(21) Florence Gurland

3. Aesthetic reaction and movement

4. American Indian

B. Preparation and handling of ceramic, and glass tessera

1. Methods of preparing and handling ceramic tessera

a. Wedging

b. Kneading

c. Conditioning

d. Storing

2. Types of ceramic tessera

a. Low fire ceramic tessera (Earthenware)

b. High fire ceramic tessera

(1) Stoneware

(2) Porcelain

3. Eguipment and tools
    a. Wedging boards with cutting wire and canvas
    b. Large heavy duty cans and crocks
    c. Plaster and setstone bats
    d. Large natural sponges
    e. Flexible rubbers
    f. Steel scrapers
    g. Pug mill
    h. Polyethylene plastic bags
4. Methods of preparing and handling glass tessera
    a. Cleaning
    b. Backing
    c. Scoring
    d. Smoothing irregular edges
    e. Storing
5. Types of glass tessera
    a. Stained glass
    b. Slab glass
    c. Crystal glass
    d. Textured glass
    e. Window glass
    f. Bottle glass
6. Equipment and tools
    a. Padding $\frac{1}{4}$inch sheet cork

b. Polishing cloths

c. Graphite glass pencil

d. Steel rule

e. Glass cleaner

f. Alcohol

g. Abrasive stone

C. Mosaic forming

1. Methods of forming

a. Direct

b. Indirect

2. Methods of forming clay tessera

a. Rolling out

b. Patting

c. Layering

3. Glazing

4. Cutting tessera: Shapes

a. Wedge

b. Triangular

c. Angular

d. Edged

e. Small

f. Medium

g. Large

5. Firing tessera tiles

6. Cutting tessera with tile cutter

7. Backing tessera

8. Edging

9. Laying

10. Grouting

11. Removing

12. Equipment and tools

    a. Setstone and plaster bats

    b. Rolling pins

    c. Fettling knives

    d. Metal rulers

    e. Tile cutters

    f. Wooden guide strips 1/4 inch thick

    g. Magnesite

    h. Grout

    i. Epoxy resin

    j. Rubber cement

    k. Casein-based glue

    l. Plywood (waterproof)

13. Methods of forming glass tessera

    a. Scoring

    b. Cutting tessera: Shapes

        (1) Circular

        (2) Wedge

        (3) Triangular

        (4) Angular

        (5) Edged

        (6) Curved

c. Glazing

d. Firing (optional)

e. Edging

f. Laying

g. Mortaring

h. Removing

14. Equipment and tools

Glass cutters	Bottle glass
Steel rule	Mortars
Glass pliers	Adhesives
Graphite glass pencil	Putty mix
Mortaring tools	Backing boards
Hammer	Reinforcing wire
Glaze brushes	Glass decorating glazes
Flint	Metal enamels
Pyrometric cones	Glass Cleaner
Stained glass	Kerosene
Plate glass	Oil
Slab glas	Alcohol

Padding 1/4 inch cork sheet

15. Mosaic materials

a. Plastic

b. Marble

c. Glass

d. Concrete

e. Wood

f. Metal

g. Paper

h. Clay

i. Marble

16. Creating a mosaic by making and using glass tessera

17. Creating a mosaic consisting of three panels

18. Creating a mosaic by using several clay and glass decorative techniques

19. Preparing glass tessera

20. Preparing clay tessera

21. Forming a mosaic by the direct method

22. Forming a mosaic by using wood, clay, and metal

23. Forming a mosaic consisting of several high fire tessera

24. Preparing a variety of glass tessera from plate glass, stained glass, and bottle glass

D. Decorating

1. Methods of decorating

a. Incising

b. Sagraffito

c. Carving

d. Embossing

e. Stamping

f. Texturing

g. Stenciling

h. Wax resist

i. Nishima

j. Satsuma

k. Slip printing

l. Slip trailing

m. Spraying

n. Terra sigillata

o. Impressing

p. Applique

q. Sprigging

r. Excising

s. Slips and engobes

t. Inlay

u. Underglazes

v. Underglaze crayons

w. Rubber resist

x. Semi-matt

y. Overglazes

z. Matt

2. Materials for decorating

a. Tools

(1) Decorating wheel

(2) Slip trailers

(3) Plastic bags

(4) Large round or flat brushes for glaze and slip application

(5) Bamboo brushes, large and medium for wax resist and other use

(6) Small pointed brushes for detail

(7) Flexible scraper, half-moon shape

(8) Steel plaster and clay modeling tools for sgraffito, blending, incising, scraping, etc.

(9) Elephant ear sponge

(10) Professional boxwood tool

(11) Steel loop modeling tool

(12) Fettling knife

(13) Pencils and india ink

(14) Plastic water container

b. Consumable materials

(1) Slip

(2) Plaster of paris

(3) Engobes

(4) Stencil paper

(5) Wax resist

(6) Rubber resist

(7) Underglaze

(8) Gloss

(9) Overglaze

(10) Semi-matt

(11) Matt

E. Glazing

1. Methods of glazing

a. Dipping

b. Pouring

c. Brushing

d. Spraying

2. Equipment and tools

a. Glazing bowl

b. Pitcher

c. Two sticks

d. Mesh metal sieve

e. Metal glaze tong

f. Glaze brushes - soft hair, flat - 1/2" to 1"

g. Ceramic spray booth with exhaust exhaust fan, stand, and filter

h. Sprayer outfit with gun compressor

i. 120 mesh sieve

3. Types of glazes

a. Low temperature glazes

(1) Alkaline glazes

(2) Lead glazes

b. Middle temperature glazes

(1) Bristol glazes

c. High fired glazes

(1) Stoneware glazes

(2) Porcelain glazes

4. Glaze textures

a. Transparent

b. Opaque

c. Gloss

d. Matt

5. Glaze defects

a. Defects due to clay body

(1) Pinholes and bubbles

(2) Sandpaper surface

(3) Blistering

b. Defects due to application

(1) Blisters and pinholes

(2) Scaly surface

(3) Running

(4) Chipping

(5) Dryness

(6) Cracking

(7) Bubbles and blisters

c. Defects in glaze composition

(1) Shivering

(2) Crazing

(3) Dull surface on gloss glaze

(4) Crawling

(5) Pinholes and bubbles

F. Firing ceramic - Tessera

1. Preparing ware for firing

a. Storing (drying cabinet)

b. Bone dry

2. Procedure for firing kiln

a. Familiarizing with kiln manual

b. Applying kiln wash

c. Stacking kiln for bisque firing

d. Stacking kiln for glaze firing

e. Measuring and managing kiln temperature

(1) Cones

(2) Pyrometer

f. Following firing schedule

g. Following cooling schedule

h. Removing ware from kiln

3. Defects due to improper firing
    a. Shattering
    b. Cracking
    c. Warping
    d. Blistering
    e. Pinholing
    f. Glaze crawling
    g. Melting
    h. Crazing
4. Equipment and tools
    a. Electric ceramic kiln with pyrometer and kiln - sitter
    b. Electric glass kiln with pyrometer and kiln - sitter
    c. Kiln shelves
    d. Kiln furniture
    e. Kiln wash
    f. Flint
    g. Pyrometric cones

VIII. EVALUATION

A. It is essential to establish a criteria for evaluating the progress of the student in an art experience. Evaluation in mosaic art cannot be rigid to the extent that it will inhibit creative expression. Creativity is unique and personal.

The product itself cannot be evaluated without taking into consideration the process the student experienced from inception to completion. In addition, evaluation must include evidence of the growth of the individual in relation to his attitude, interest, ability to complete a project, how well he can use his past experience toward problem solving, respect for his own ability and the rights of others.

Evaluation is of vital importance to the student's development. It helps to determine the growth of the student so that the teacher can further motivate and guide the student toward his fullest self-development, creativity and aesthetic growth.

B. The criteria established for evaluation will vary due to individual differences among students and

teachers. Each teacher must determine his own goals and formulate standards for evaluation always keeping in mind that evaluation must be positive as well as constructive.

The following are some suggestions in setting up criteria for evaluation:

1. Has the student learned to evaluate his own mosaic as well as that of others with consideration to the sensuous quality of the material, form, and content?
2. Has the student designed the entire object with an awareness of space, form, movement, order, relationship of parts to the whole, and good color organization?
3. Has the student expressed his ideas creatively in the medium in an original and meaningful way?
4. Has the student developed a sensitivity to the material?
5. Does the student express his ideas and individuality in clay?
6. Has the student become aware that texture results from an interaction of the medium and the tools?
7. Is the student aware of the difference between tactile and visual textures.

8. Has the student become sensitive to the expressive qualities of the different mosaic materials and tools?
9. Is the student aware that improper use of material and tools results in poorly constructed forms?
10. Is the student aware that variety can add interest to forms but too much can destroy it?
11. Does the student react empathically to the medium in terms of two-dimensional forms?
12. Is the student familiar with good mosaic art of the past and present?
13. Is the student able to identify from contemporary mosaicists the ways in which the craftsmen manipulate their tools and materials?
14. Has the student developed good work habits?
15. Has the student's behavior outside the art class improved as a result of his art experience?
16. Has the student developed a respect for his personal ability?
17. Has the student developed a respect for the rights of others?

18. Has the student acquired increased efficiency in handling materials and tools?
19. Has the student developed the ability to carry the project through to completion?
20. Has the student learned the firing process and how to use it to its fullest advantage?
21. Has the student developed good craftsmanship and yet retained the natural qualities of Mosaic?
22. Has the student learned to form tessera correctly so it does not warp or crack?
23. Is the product suited for the purpose for which it was made?
24. Does it incorporate the principles of good mosaic design?
25. Is the product the one best suited for work in clay, glass, plastic, wood, etc.?
26. Is the product well constructed?
27. Does the product indicate individuality and expressive quality?
28. Does the design fit the form?
29. Has the student improved in attitude, interests, and development of technical skills?

IX. RESOURCES

A. BOOKS

Argiro, Larry, Mosaic, Art Today, Scranton: International, 1961.

Stribling, Mary Lou, Mosaic Techniques, New York: Crown, 1968.

Egyptian

Raphael, Max, Prehistoric Pottery and Civilizations in Egypt, New York: Phantom, 1947.

Savage, George, Pottery through the Ages, New York: Pelican, 1954.

Walters, H. B. History of Ancient Pottery, London: Murray, 1905

Woldering, Irmgard, The Art of Egypt, New York: Greystone Press, 1963.

Ancient Near East

Childs, V. Gordon, New Light on the Most Ancient East, London: Rontledge and Kegan Paul, Ltd., 1935.

Lloyd, Seton, The Art of the Ancient Near East, New York: Praeger, 1961.

Pope, Arthur U., A Survey of Persian Art, London: Oxford University, 1964.

Wilkinson, Charles K., Iranian Ceramics. New York: Harry N. Abrams, 1963.

Asia: (India, China, Korea, and Japan)

Auboyer, Jeannine and Goepper, Roger, The Oriental World, New York: McGraw-Hill, 1967.

Fourcade, Francis, Art Treasures of the Peking Museum, New York: Harry N. Abrams, 1970.

Lee, Sherman E., A History of Far Eastern Art, New Jersey: Prentice-Hall, 1964.

Munsterberg, Hugo, Art of the Far East, New York: Harry N. Abrams, 1968.

Rhodes, Daniel, Tamba Pottery, California: Kodansha International, Ltd., 1970.

Sanders, Herbert H., The World of Japanese Ceramics, California: Kodansha International, Ltd., 1967.

Savage, George, Pottery through the Ages, New York: Pelican, 1954.

Classical: (Crete, Greece, Etrusca, and Rome)

Marinatos, S., Crete and Mycenac, New York: Harry N. Abrams, 1960.

Savage, George, Pottery through the Ages, New York: Pelican, 1954.

Walters, H. B., History of Ancient Pottery, London: J. Murray, 1905.

Wilson, Robert, Art Concept in Clay, Coral Gables: University of Miami Press, 1957.

Byzantium: (Rome)

Anthony, Edgar W., A History of Mosaics, Boston: Sargent, 1935.

Grabar, Andre, Byzantium, London: Thames and Hudson, 1966.

Islam

Lane, Arthur, Early Islamic Pottery, London: Faber, 1939.

_____, Later Islamic Pottery, London: Faber, 1957.

Savage, George, Pottery through the Ages, New York: Pelican, 1954.

Pre-Columbian

Anton, Ferdinand and Dockstader, Frederick J., Pre-Columbian Art and Later Indian Tribal Arts, New York: Harry N. Abrams, 1968.

Bernal, Ignacio, 3000 Years of Art and Life in Mexico, New York: Harry N. Abrams, 1968.

Lehmann, Henri, Pre-Columbian Ceramics, New York: Viking, 1962.

Mason, J. Alden, The Ancient Civilizations of Peru, Baltimore: Penquin, 1957.

Westheim, Paul, The Sculpture of Ancient Mexico, New York: Doubleday, 1963.

Renaissance in Europe

Charleston, Robert J., World Ceramics, New York: McGraw Hill, 1968.

Goldscheider, Ludwig, Michelangelo's Models in Wax and Clay, London: Phaidon, 1962.

B. SUGGESTED PERIODICALS FOR PUPILS

Ceramics Monthly
Box 4548
Columbus, Ohio 43212

Craft Horizons
29 West 53rd Street
New York, N. Y. 10019

Design Quarterly
1710 Lyndale Avenue
Minneapolis 3, Minn.

School Arts
50 Portland Street
Worcester, Mass. 01608

C. SUGGESTED PLACES TO VISIT

Bass Museum of Art
2100 Collins Avenue
Miami Beach, Florida

Ceramic League of Miami
7867 North Kendall Drive
Kendall, Florida

Crandon Park Zoo
Key Biscayne, Florida

Fairchild Tropical Garden
10901 Old Cutler Road
Coral Gables, Florida

Fantastic Gardens
9550 S. W. 67th Avenue
Miami, Florida

Grove House Gallery
3496 Main Highway
Coconut Grove, Florida

Grove House School of Art
3496 Main Highway
Coconut Grove, Florida 33133

Japanese Gardens
MacArthur Causeway
Miami, Florida

Lowe Art Museum
1301 Miller Drive
Coral Gables, Florida

Miami Art Center
7867 North Kendall Drive
Kendall, Florida

Miami Musuem of Modern Art
381 N. E. 20th Street
Miami, Florida

Miami Seaquarium
Rickenbacker Causeway
Virginia Key, Florida

Miami Studio Shop
2363 West Glagler Street
Miami, Florida

Museum of Science-Planetarium
3280 South Miami Avenue
Miami, Florida

Sandpiper
2942 Florida Avenue
Coconut Grove, Florida 33133

Scholastic Art Awards Exhibition
Burdine's Department Store
22 East Flagler Street
Miami, Florida

Village Corner Gallery
1136 South Dixie Highway
Coral Gables, Florida

Vizcaya Art Museum
3251 South Miami Avenue
Miami, Florida

D. RESOURCE PEOPLE - Ceramic League of Miami

Isabel Adamitz	Carol King
Virginia L. Davis	Fran Williams
Chili Emerman	Irene Batt
Geri Popence	Dorothy Bosco
Marilyn Sherwood	Marcy Dunn
Lynn Glatstein	Edythe Powell
Natalie B. Linder	Virginia C. Stemples
Janel Lund	Mary J. Acosta
Juanita May	Edna de Line
Genevieve McCrea	Jacquelyn Ferguson
Marie Furman	Henry Gordon
Mary Grabill	Lillian H. Stoff
Elinor Jensen	Davi Justi
Inga Luka	Janet Festinger
Richard Bugdal	Rhoda Ramer
Jean Guthrie	Bernyce Schleninger
	Lois Gordon

E. SUGGESTED MEDIA RESOURCES FOR PUPILS AND TEACHERS

Film Strips

Scholastic Film Strips
906 Sylvan Avenue
Englewood Cliffs, N. J. 07632

Art by Talented Teenagers - 1969: Sculpture and other Three-Dimensional Art.

Art by Talented Teenagers - 1970: Sculpture and other Three-Dimensional Art.

Art by Talented Teenagers - 1968: Sculpture and other Three-Dimensional Art.

Art by Talented Teenagers - 1967: Sculpture and other Three-Dimensional Art.

Art by Talented Teenagers - 1961-1966: Sculpture and other Three-Dimensional Art.

Collected Works of Teenage Art - Sculpture and other Three-Dimensional Art.

F. PERIODICALS AND PROFESSIONAL JOURNALS FOR TEACHERS

Ceramic Age
9 Chester Building
Cleveland 14, Ohio

Ceramic Industry
5 S. Wabash Avenue
Chicago 3, Illinois

Ceramic Data Book
Industrial Publications
5 S. Wabash Avenue
Chicago 3, Illinois

Ceramics Monthly
Box 4548
Columbus, Ohio

Craft Horizons
29 West 53rd Street
New York, N. Y.

Design Quarterly
1710 Lyndale Avenue
Minneapolis 3, Minnesota

Journal of the American
Ceramic Society
Columbus, Ohio

Journal of the National Art Education
Association
1201 Sixteenth Street, N.W
Washington, D. C.

Journal of the National Council on
Education for the Ceramic Arts
Room 132, Fine Arts Building
University of Illinois
Champaign, Illinois

School Arts
50 Portland Street
Worcester, Massachusetts

G. SUPPLIERS: Clays, Kilns, and Equipment

A. D. Alpine, Inc.
11837 Teale Street
Culver City, California

Advanced Kiln Company
2543 Whittier Boulevard
Los Angeles, California

American Art Clay Company
4717 West 16th Street
Inidanapolis, Indiana

Cedar Heights Clay Company
50 Portsmouth Road
Oak Hill, Ohio

Craftools, Inc.
401 Broadway
New York, N. Y.

Denver Fire Clay Company
3033 Black Street
Denver, Colorado

Garden City Clay Company
Redwood City, California

Harrop Ceramic Service
347 East 5th Avenue
Columbus, Ohio

Kentucky-Tennessee Clay Company
Mayfield, Ohio

O. Hommel Company
209 Fourth Avenue
Pittsburgh, Pennsylvania

Miami Studio Shop
2363 W. Flagler Street
Miami, Florida

Newton Pottery Supply Company
Newton, Massachusetts

Norman Ceramics Company, Inc.,
225 Mamaroneck Avenue
Mamaroneck, N. Y.

Stewart Clay Co., Inc.
133 Mulberry Street
New York, N. Y.

U. S. Stoneware Company
Akron, Ohio

Van Howe Company
1185 South Cherokee Avenue
Denver, Colorado

W. H. Fairchild
712 Centre Street
Freeland, Pennsylvania

Western Ceramic Supply Company
1601 Howard Street
San Francisco, California

Western Stoneware Company
Monmouth, Illinois

H. SUGGESTED REFERENCES FOR TEACHERS

Adams, Leonhard, Primitive Art, London: Penquin Books, Ltd., 1940.

Anton, Ferdinand and Dockstader, Frederick J., Pre-Columbian Art and Later Indian Tribal Arts, New York: Harry N. Abrams, 1968.

Arias, P. E., Greek Vase Painting, New York: Harry N. Abrams, 1961.

Auboyer, Jeannine and Goepper, Roger, The Oriental World, New York: Van Nostrand Rheinhold Company, 1970

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Hofsted, Jolyon, Step-by-Step Ceramics, New York: Golden Press, 1967.

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